

IN THE SPECIFICATION:

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~strikethrough~~.

Please REPLACE the paragraph beginning at page 1, line 9, with the following paragraph:

When a relative position between a robot and an operation target or attitudes thereof are changed because position of the robot or operation target is changed, a teaching position of an already-prepared robot operation program must be corrected in some cases. In the case of an operation program prepared by an off-line program, it is necessary to correct a teaching point position of the robot operation program prepared off-line in accordance with actual position of the operation target at a worksite due to an error between positions of the robot and the operation target prepared off-line and actual positions of the robot and the operation target. The teaching position data of the program of the robot usually includes information of a position of ~~an~~a work tool and an attitude thereof. In the following description, the correction of the teaching point position means to correct one or both of a position of the teaching position of the existing program and an attitude thereof.

Please REPLACE the paragraph beginning at page 2, line 10, with the following paragraph:

In the conventional correcting method of the teaching point position, the robot is stopped before the teaching position during the step feeding action so that the robot or ~~an~~a work tool of the robot does not come into contact with the operation target and then, the teaching position is corrected manually one point by one point. This work takes time and labor. If the input of robot stopping command is delayed, there is an adverse possibility that the work tool collides against the operation target and the work tool or the operation target is damaged. If the robot is stopped ~~is~~ too early before reaching the teaching point, the ~~manually~~manual feeding time by jog action becomes long and the operation efficiency is deteriorated.

Please REPLACE the paragraph beginning at page 2, line 26, with the following paragraph:

A first aspect of the present invention provides a teaching position correcting apparatus for correcting a teaching point position of a robot operation program, comprising work tool moving/stopping means for allowing ~~ana~~ work tool mounted on an arm tip end of the robot to move toward a teaching point of the robot operation program and to stop the work tool before it reaches the teaching point; jog feed means for moving the robot by fog feeding from a position where the work tool is stopped by the work tool moving/stopping means; contact-judging means for judging whether the work tool and an operation target come into contact with each other; and teaching position correction instructing means for commanding to correct the teaching position.

Please REPLACE the paragraph beginning at page 4, line 1, with the following paragraph:

A second aspect of the invention provides a teaching position correcting apparatus for correcting a teaching point position of a robot operation program, comprising work tool moving/stopping means for allowing ~~ana~~ work tool mounted on an arm tip end of the robot to move toward a teaching point of the robot operation program and to stop the work tool before it reaches the teaching point; jog feed means for moving the robot by jog feeding from a position where the work tool is stopped by the work tool moving/stopping means; positional relation presenting means for presenting, to an operator, a positional relation between the work tool and an operation target; and teaching position correction instructing means for commanding to correct a teaching position.

Please REPLACE the paragraph beginning at page 4, line 14, with the following paragraph:

The positional relation presenting means constituting the teaching position correcting apparatus of this aspect includes ~~ana~~ work tool tip end which can be attached to and detached from the work tool, camera means for capturing the operation target in view, and image display means for presenting an image of the camera means to an operator.

Please REPLACE the paragraph beginning at page 5, line 11, with the following paragraph:

A third aspect of the invention provides a teaching position correcting apparatus for correcting a teaching point position of a robot operation program, comprising work tool moving/stopping means for allowing ~~and~~ work tool mounted on an arm tip end of the robot to move toward a teaching point of the robot operation program and to stop the work tool before it reaches the teaching point; jog feed means for moving the robot by jog feeding from a position where the work tool is stopped by the work tool moving/stopping means, teaching position correction instructing means for commanding to correct a teaching position, and teaching point position correcting means for automatically correcting a next and subsequent teaching point positions based on a position correcting amount of one or more teaching points whose teaching position was corrected.

Please REPLACE the paragraph beginning at page 6, line 4, with the following paragraph:

A fourth aspect of the invention provides a teaching position correcting apparatus for correcting a teaching point position of a robot operation program, comprising work tool moving/stopping means for allowing ~~and~~ work tool mounted on an arm tip end of the robot to move toward a teaching point of the robot operation program and to stop the work tool when the distance between the work tool and the teaching point becomes shorter than a predetermined distance; jog feed means for moving the robot by jog feeding from a position where the work tool is stopped by the work tool moving/stopping means; and teaching position correction instructing means for commanding to correct a teaching position.

Please REPLACE the paragraph beginning at page 7, line 4, with the following paragraph:

Fig. 3 is a flowchart for explaining a procedure for stopping a robot at a point before a teaching position using the teaching position correcting apparatus shown in Fig. 1; and

Please REPLACE the paragraph beginning at page 10, line 6, with the following paragraph:

From this stopped position, an operator moves the robot manually (jogging) such that the robot assumes a desired position and attitude with respect to the operation target (step 102). Usually, in the spot welding, the position is taught such that the welding chip at a tip end of the welding gun which is the work tool 4 comes into contact with the plate metal of the operation target.